

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-352868

(43)Date of publication of application : 06.12.2002

(51)Int.Cl.

H01M 14/00

H01L 31/04

(21)Application number : 2001-160954 (71)Applicant : TOYOTA CENTRAL RES & DEV LAB INC
AISIN SEIKI CO LTD

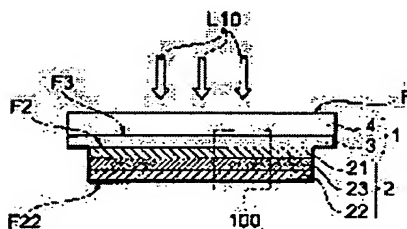
(22)Date of filing : 29.05.2001 (72)Inventor : HIGUCHI KAZUO
TSUKIGASE AZUSA
INABA TADASHI
AZUMA HIROZUMI
MOTOHIRO TOMOMI
TOYODA TATSUO
NAKAJIMA JUNJI
SANO TOSHIYUKI

(54) OPTICAL ELECTRODE AND DYE SENSITIZING TYPE SOLAR BATTERY HAVING THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an optical electrode having a superior incident light absorbing efficiency and a dye sensitizing type solar battery having a superior energy conversion efficiency.

SOLUTION: The optical electrode 10 has a semiconductor electrode 2 with a light receiving surface F2, and a transparent electrode 1 arranged on the light receiving surface F2 so that the transparent electrode is adjacent to the semiconductor electrode. The semiconductor electrode 2 comprises a plurality of more than three layers, each of which contains oxide semiconductor particles as a semiconductor material. The average particle diameter of the oxide semiconductor particles included in each layer increases from the most inner layer 21 arranged in the closest position to the transparent



electrode to the most outer layer 22 arranged in the farthest position to the transparent electrode.

LEGAL STATUS

[Date of request for examination] 12.12.2007

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]